



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR       | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------------|---------------------|------------------|
| 09/777,767      | 02/06/2001  | Edgar Herbert Callaway JR. | PT03341U            | 3153             |

24273 7590 04/15/2004

MOTOROLA, INC  
INTELLECTUAL PROPERTY SECTION  
LAW DEPT  
8000 WEST SUNRISE BLVD  
FT LAUDERDAL, FL 33322

EXAMINER

IQBAL, KHAWAR

|          |              |
|----------|--------------|
| ART UNIT | PAPER NUMBER |
|----------|--------------|

2686

DATE MAILED: 04/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/777,767

Applicant(s)

CALLAWAY, EDGAR HERBERT

Examiner

Khawar Iqbal

Art Unit

2686

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 03 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☐ Claim(s) \_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____  |

### **DETAILED ACTION**

The Affidavits under 37 CFR 1.132 filed 02-14-02 is insufficient to overcome the rejection of claims 1-27 because: Should include all information. The Affidavits must include an acknowledgment by the declarant that willful false statements and the like are punishable by fine or imprisonment, or both (18 U.S.C. 1001) and may jeopardize the validity of the application or any patent issuing thereon. The declarant must set forth in the body of the declaration that all statements made of the declarant's own knowledge are true and that all statements made on information and belief are believed to be true.

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 18 and 23 are rejected under 35 U.S.C. 102(e) as being unpatentable by Keirinbou (6285893).

Regarding claim 18 Keirinbou teaches a wireless information device within a wireless information communication system for receiving and processing a message, the wireless information device comprising (abstract, figs. 2,4,5):

an antenna system (4,5) having a plurality of antennas (4,5) for receiving the message (col. 3, lines 20-25);

a radio frequency switch (8) coupled to the antenna system for activating a first antenna (4) of the plurality of antennas as an active antenna in response to an antenna control signal (col. 3, lines 24-30, col. 4, lines 1-6);

a transceiver (7) coupled to the radio frequency switch (8) for receiving the message from the antenna system (4,5) through the radio frequency switch, and further for sending a signal to the antenna system in response to a command (col.3, lines 24-30 and 60-67);

a controller (6) coupled to the radio frequency switch (8) and to the transceiver (7) for processing the message and further for sending the antenna control signal to the radio frequency switch and further for sending the command to the transceiver (col.4, lines 1-18, col. 5, lines 1-25);

a memory coupled to the controller for storing the message (col.4, lines 1-18);  
and

a display (9) coupled to the controller (6) for displaying the message in response to a display command from the controller, wherein the display includes a display orientation, and further wherein the antenna control signal is generated by the controller in response to the display orientation (col.4, lines 1-37).

Art Unit: 2686

a plurality of hand sensors (fig. 2, elements 2,3) coupled to controller (col. 2, lines 29-36), wherein the controller receives a signal from at least at one of the plurality of hand sensors (col. 2, lines 29-36), and further wherein the controller sends the antenna control signal to the radio frequency switch in response to receiving the signal from at least (one of the plurality of hand sensors (col. 2, lines 29-47), further wherein the radio frequency switch activates a second antenna of the plurality of antenna of the system as the active antenna in response to receipt of the antenna control signal(col. 2, lines 29-47, col.4, lines 1-37).

Regarding claim 23 Keirinbou teaches a wireless information device within a wireless information communication system for receiving and processing a message, the wireless information device comprising (abstract, figs. 2,4,5):

an antenna system having a plurality of antennas for receiving the message (col. 3, lines 20-25);

a radio frequency switch coupled to the antenna system for activating a first antenna of the plurality of antennas as an active antenna in response to an antenna control signal (col. 3, lines 24-30, col. 4, lines 1-6);

a receiver coupled to the radio frequency switch for receiving the message from the antenna system through the radio frequency switch (col. 3, lines 24-30 and 60-67);

a controller coupled to the radio frequency switch and to the receiver for processing the message and further for sending the antenna control signal to the radio frequency switch (col. 4, lines 1-18, col. 5, lines 1-25);

a memory coupled to the controller for storing the message (col. 4, lines 1-18);  
and

a display coupled to the controller for displaying the message in response to a display command from the controller, wherein the display includes a display orientation, and further wherein the antenna control signal is generated by the controller in response to the display orientation (col. 4, lines 1-37).

a plurality of hand sensors (fig. 2, elements 2,3) coupled to controller (col. 2, lines 29-36), wherein the controller receives a signal from at least at one of the plurality of hand sensors (col. 2, lines 29-36), and further wherein the controller sends the antenna control signal to the radio frequency switch in response to receiving the signal from at least one of the plurality of hand sensors (col. 2, lines 29-47), further wherein the radio frequency switch activates a second antenna of the plurality of antenna of the system as the active antenna in response to receipt of the antenna control signal(col. 2, lines 29-47).

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Art Unit: 2686

4. Claims 1 rejected under 35 U.S.C. 103(a) as being unpatentable over Keirinbou (6285893) and further in view of Comp, Jr. (6411826).

5. Regarding claims 1,7 Keirinbou teaches a wireless information device within a wireless information communication system for receiving and processing a message, the wireless information device comprising (abstract, figs. 2,4,5):

an antenna system (4,5) having a plurality of antennas (4,5) for receiving the message (col. 3, lines 20-25);

a radio frequency switch (8) coupled to the antenna system for activating a first antenna (4) of the plurality of antennas as an active antenna in response to a first antenna control signal (col. 3, lines 24-30, col. 4, lines 1-6);

a transceiver (7) coupled to the radio frequency switch (8) for receiving the message from the antenna system (4,5) through the radio frequency switch, and further for sending a signal to the antenna system in response to a command (col.3, lines 24-30 and 60-67);

a controller (6) coupled to the radio frequency switch (8) and to the transceiver (7) for processing the message and further for sending the first antenna control signal to the radio frequency switch and further for sending the command to the transceiver (col.4, lines 1-18, col. 5, lines 1-25);

a memory coupled to the controller for storing the message (col.4, lines 1-18);  
and

a display (9) coupled to the controller (6) for displaying the message in response to a display command from the controller, wherein the display includes a display

orientation (col.4, lines 1-37). Keirinbou teaches a switch (8) selects one among the antennas distributed in different directions in a device body (1) depending on the sensors (2,3), which detect the direction of contact of a moving body and the device body. Keirinbou does not specifically teach wherein the controller is adapted to generate the first antenna control signal associated with the first display orientation.

In an analogous art, Comp, Jr. teaches wherein the controller is adapted to generate the first antenna control signal associated with the first display orientation (col. 5, lines 34-55). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Keirinbou by specifically adding feature a display coupled to the processor, wherein the processor generates a message on the display during global position processing to encourage a horizontal orientation of the patch antenna in order to enhance controller is generated the first antenna control signal associated with the first display orientation as taught by Comp, Jr.

As to claims 13,15 it is considered that claims 13,15 are broaden then claim 1 and therefore the claims are rejected for the same reason as set forth in claim 1.

Regarding claims 2,8,19,24 Keirinbou teaches a user interface (10) coupled to the controller for sending a user interface signal to the controller, wherein the controller sends the display command to the display in response to receipt of the user interface signal (col. 4, lines 1-18, col. 5, lines 1-25).

Regarding claims 3,9,16,20,25 Keirinbou teaches wherein the wireless information device further comprises: a user controlled display rotation switch coupled



Art Unit: 2686

to the controller, wherein the controller sends a display orientation signal to the display in response to a change in mode of the user controlled display rotation switch, and further wherein the display changes display orientation in response to receipt of the display orientation signal (col. 4, lines 20-65, col. 5, lines 1-25).

Regarding claims 4, 10,17,21,26 Keirinbou teaches wherein the controller sends the antenna control signal to the radio frequency switch in response to a change in mode of the user controlled display rotation switch, and further wherein the radio frequency switch activates a second antenna of the plurality of antennas of the antenna system as the active antenna in response to receipt of the antenna control signal (col. 4, lines 20-65, col. 5, lines 1-25).

Regarding claims 5,11 Keirinbou teaches a plurality of hand sensors (fig. 2, elements 2,3) coupled to controller (col. 2, lines 29-36), wherein the controller receives a signal from at least at one of the plurality of hand sensors (col. 2, lines 29-36), and further wherein the controller sends a second antenna control signal to the radio frequency switch in response to receiving the signal from at least one of the plurality of hand sensors (col. 2, lines 29-47), further wherein the radio frequency switch activates a second antenna of the plurality of antenna of the system as the active antenna in response to receipt of the second antenna control signal(col. 2, lines 29-47).

Regarding claims 6,12,22,27 Keirinbou teaches an orientation sensor coupled to the controller for determining the display orientation, wherein the controller receives a signal from the orientation sensor, and further wherein the controller sends the antenna control signal to the radio frequency switch in response to receiving the signal from the

orientation sensor, and further wherein the radio frequency switch activates a second antenna of the plurality of antennas of the antenna system as the active antenna in response to receipt of the antenna control signal (col. 4, lines 20-65, col. 5, lines 1-25).

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Keirinbou (6285893) and further in view of Comp, Jr. (6411826) and Horii (6498589).

Regarding claim 14 Keirinbou and Comp, Jr. do not specifically teach a third antenna substantially parallel to the first antenna and a fourth antenna substantially parallel to the second antenna, wherein the first antenna and the third antenna are substantially perpendicular to the second antenna and the fourth antenna. Keirinbou teaches a switch (8) selects one among the antennas distributed in different directions in a device body (1) depending on the sensors (2,3) which detect the direction of contact of a moving body and the device body (col. 2, lines 15-50). **Also Keirinbou teaches the device may be a configuration having three or more transmit-receive antennas and sensors provided on the surfaces including other surfaces.**

In an analogous art, Horii teaches a third antenna substantially parallel to the first antenna and a fourth antenna substantially parallel to the second antenna, wherein the first antenna and the third antenna are substantially perpendicular to the second antenna and the fourth antenna (fig. 3 and 4). Tree type antennas (8a-8d) for four UHF bands are distributed in a casing. The antennas are arranged at different height positions in the casing, so as to receive electromagnetic waves from different directions. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the device of Keirinbou and Comp, Jr. by specifically

Art Unit: 2686

adding first antenna and the third antenna are substantially perpendicular to the second antenna and the fourth antenna in order to enhance system performance of the mobile system purpose of increasing efficiency as taught by Horii.

### ***Response to Arguments***

6. Applicant's arguments with respect to claims 1-17 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to KHAWAR IQBAL whose telephone number is 703-306-3015.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **BANKS-HAROLD, MARSHA**, can be reached at 703-305-4379.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

**(703) 872-9314 (for Technology Center 2684 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121 Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

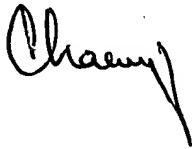
Art Unit: 2686

**Any inquiry of a general nature or relating to the status of this application**

**or proceeding should be directed to the Technology Center 2600**

**Customer Service Office whose telephone number is (703) 306-0377.**

Khawar Iqbal



*Marsha D Banks-Harold*

MARSHA D. BANKS-HAROLD  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600